WHITHER FRENCH AGRICULTURE?

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This paper will attempt to follow the outline suggested by the organisers of the meeting with, however, some rearrangements of the various points.

1 Introduction - The General Setting

In 1939, French agriculture was one of the most backwards of Western Europe - with the allowance for broad regional differences which should never be forgotten but will to a large extent be brushed aside in this short paper. This can be explained by the protectionist policies in force after 1885 or 1890, by the sluggish demand linked to demographic stagnation which prevailed earlier in France than in any other Western country, by the almost nil rate of economic growth in the interwar period, by deliberate policies to slow agricultural progress 1).

Since 1945, the situation has radically changed and economic and agricultural progress has been considerable. Between 1946 and 1969, the population of France rose from 40 million to 50 million inhabitants, the same increase as between 1800 and 1946. The rate of growth of the French economy has, almost every year, exceeded 5 per cent. From 1966 to 1970 farm production increased at an average rate of 6.6 per cent a year in value or 2.9 per cent in volume. The active farm population in the country continued to decrease rapidly: from about 3.9 million persons in 1962 to about 2.8 millions in 1970. It now represents 13 per cent of France's total active population, which is a very significant decline compared with the situation in 1946, roughly 30 per cent of active population in agriculture. The number of farms is now decreasing at a rate of nearly 3 per cent a year - and, as will be seen later, this may accelerate. French agricultural research has rapidly developed and has in many fields become one of the strongest in Western Europe. Agricultural teaching and advisory activities, however, are still inadequate or even poor. The use of non-farm imputs has increased rapidly, by 5.6 per cent a year in volume in recent times, and they now account for about 30 per cent of the value of production, which is one mark of a "modern" agriculture. Lastly, the balance of foreign trade in agricultural food products is, at last, slightly positive.

Even if the French situation has totally changed compared with what it was during the first half of the 20th century, there is no reason for complacency. In part because such a late start was taken, technical performances are still low in many areas, the orientation of crop and livestock production is not satisfactory, agricultural processing and marketing firms are often inefficient and, above all, the structure of farms is in most cases poorly adjusted to the needs of modern low-cost farming.

The aim of this paper is to analyse in greater detail the main features of this recent evolution and to present some elements and data which can serve as a basis for forecasting - though this word may be somewhat too ambitious considering the broad areas of uncertainty concerning the evolution of many variables and their impact. This analysis will be divided in two parts: the first concerning the various inputs including technological change and its effects on yields; the second concerning size and structure of farms, the effects of structural policy and vertical integration.

Before this analytical examination, we wish however to present a few general remarks on the justification for continued expansion of production in several sectors of French agriculture.

**Expansion is still justified to alleviate the farm income problem**

There is no reason for believing that the level of farm incomes can be relatively satisfactory in economies with a low population growth, a low income elasticity of demand for food, rapid technological progress raising labour productivity at the rate of 6, 7 or 8 per cent per year and, at the same time, strong structural rigidities slowing down the migration of farmers off the land to other sectors of the economy. Of course one should attempt to increase that mobility, but taking it as it is, and considering thus the labour input as a constant at a given time, it seems impractical to raise the income of this labour by any other means than through an increase in the volume produced (and particularly not by price supports). With expansion, solving the farm income problem is difficult; without expansion it is certainly hopeless.

This reasoning is still more convincing at the farm level and, after all, the production decisions of farmers do not have to be consistent with, and lead to, macro-level equilibrium. They are farm decisions and should be treated as such. An individual farmer does not care about butter surpluses or world grain trade or the cost to the national treasury or to the Fonds Européen d'Orientatation et de Garantie Agricole (FEOGA) of dumping excess commodities on unwilling foreign consumers. He just knows that, considering the prices of inputs and the probable prices of output, he will get a better return on his fixed factors of production - above all his labour -
if he adopts innovations and expands production. This reasoning must not be pushed too far. The important point is that, largely for the historical lags explained above, many components of French agriculture are far away from the point where marginal value productivity of variable inputs is lower than their cost. Technology still pays. All farm accounting figures confirm the fact that in most types of farming in France, the high-input, high-output farms do relatively better than the others. It is not a question of being in Australia with low land prices.

More specifically, one must take into account regional differences in incomes and levels of development. Through no real fault of their own, but rather on account of the weight of history and inadequacies in the school system which did not encourage needed mobility, farmers in Brittany or Limousin or South-West France have a net productivity of labour which is one half or one third of that observed in the Paris Basin or even Languedoc. There is no magic wand to change all those farmers into qualified workers for advanced industries. The second best solution and the only hope in the reasonably short term is an expansion of production by the application of known technology and some structural readjustment. How can economists or politicians condemn those people because the global market situation does not really warrant that expansion?

It remains to be examined whether this strategy of agricultural expansion, needed at the farm level to help improve incomes, and at the regional level to reduce disparities, is consistent with a logical pattern of European agriculture.

For reasons of natural conditions, size of farms and even land prices, many French regions can produce at lower cost than most of the other regions of Western Europe. The very fact that French agriculture was (and still is) "backward" and less intensive provides it with a margin for expansion which can be attained at relatively low cost. International cost comparisons are, of course, fraught with difficulties and the low level of technical "know how" on many French farms counteracts their advantage with regard to natural conditions, but on the whole it seems that for many commodities France can be a relatively low-cost producer, even compared with Denmark, with a definite advantage when it comes to Mediterranean crops like many temperate fruits and vegetables. This is confirmed by the fact that before the European Community's common agricultural policy came into force French prices were for the most part lower than those in other Common Market countries.

This should be reassuring for those who have respect for the principles of comparative advantage. On pure economic grounds, there is a strong case for an expansion of French agricultural production at the expense of agricultural production in other member countries of the European Community.

The fact that an expansion of French agriculture seems justified on the basis of an optimal organisation of agriculture in the European Community is no proof that it is consistent with the broad pattern of a better world that some dreamers may visualise. It has to be admitted, quite bluntly, that French agricultural expansion is a menace for certain countries with low-cost agricultures. Our world, however, is full of menaces and departures from the norm of comparative advantage which presupposes that countries are equal and not dominated, that competition is perfect, that factors of production (particularly labour) are mobile within countries and that there are no monopolies or transnational firms.

Allowing for the possibilities of a significant reduction in grain prices, which could reduce the incentive for "excessive" development of cereal production in Western Europe, thereby satisfying the requests of producers in North America and Australia, and admitting also that there is less justification for growing sugar than growing grain in Western Europe, it does not seem fair to condemn agricultural expansion in France.
To sum up, there has been presented here the case for a full application of technology and some increases in farm production in France. This is justified mostly to help raise low incomes. It is also logical from the point of view of an intra-European division of labour. It is defensible from the point of view of inter-continental trade provided prices are not excessively supported. One might wonder, however, whether this policy is consistent with the general state of the French economy. We will attempt to come back to his difficult question in our conclusion.

Even if our views on the justifications of expansionist agricultural strategy were not agreed upon, the mere examination of current trends show that French agriculture is already a net exporter of most food and feed commodities. The only important deficit areas, besides tropical or subtropical commodities, are fats and oils, oil cakes, pork, mutton and, to a certain extent beef. This is summarised in table 1.

Table 1: BALANCE SHEETS FOR MAJOR COMMODITIES FRANCE 1969-70 OR 1970

<table>
<thead>
<tr>
<th>Commodity</th>
<th>usable production</th>
<th>Sales by farmers</th>
<th>Foreign trade balance</th>
<th>Degree of self-sufficiency</th>
<th>Market (b)</th>
<th>Total (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>in millions of tons</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft wheat</td>
<td>14,1</td>
<td>11,1</td>
<td>5,4</td>
<td>180</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td>Durum wheat</td>
<td>0,3</td>
<td>0,3</td>
<td>-0,2</td>
<td>59</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>Barley</td>
<td>9,5</td>
<td>5,4</td>
<td>3,7</td>
<td>273</td>
<td>157</td>
<td></td>
</tr>
<tr>
<td>Maize</td>
<td>5,7</td>
<td>4,3</td>
<td>1,9</td>
<td>201</td>
<td>161</td>
<td></td>
</tr>
<tr>
<td>Total grain</td>
<td>33</td>
<td>21,9</td>
<td>11,1</td>
<td>193</td>
<td>147</td>
<td></td>
</tr>
<tr>
<td>Sugar</td>
<td>2,5</td>
<td>-</td>
<td>0,4</td>
<td>-</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>Potatoes</td>
<td>9,0</td>
<td>-</td>
<td>0,3</td>
<td>-</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Wine (million hl)</td>
<td>50,0</td>
<td>47,3</td>
<td>-7</td>
<td>88 (d)</td>
<td>80</td>
<td></td>
</tr>
<tr>
<td>Fats and oils (vegetable edible)</td>
<td>0,15</td>
<td>-</td>
<td>0,68</td>
<td>-</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td>1,24</td>
<td>-</td>
<td>0,11</td>
<td>-</td>
<td>110</td>
<td></td>
</tr>
<tr>
<td>Veal</td>
<td>0,39</td>
<td>-</td>
<td>£</td>
<td>-</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>Pork</td>
<td>1,30</td>
<td>-</td>
<td>-0,25</td>
<td>-</td>
<td>84</td>
<td></td>
</tr>
<tr>
<td>Mutton</td>
<td>0,12</td>
<td>-</td>
<td>-0,03</td>
<td>-</td>
<td>78</td>
<td></td>
</tr>
<tr>
<td>Poultry meat</td>
<td>0,77</td>
<td>-</td>
<td>-0,02</td>
<td>-</td>
<td>103</td>
<td></td>
</tr>
<tr>
<td>Total meat (fat excluded)</td>
<td>4,13</td>
<td>-</td>
<td>-0,11</td>
<td>-</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td>Eggs</td>
<td>0,68</td>
<td>-</td>
<td>-0,01</td>
<td>-</td>
<td>98</td>
<td></td>
</tr>
<tr>
<td>Milk (total)</td>
<td>30,7</td>
<td>19,4</td>
<td>3,6 (e)</td>
<td>-</td>
<td>113 (e)</td>
<td></td>
</tr>
</tbody>
</table>

Sources: Based on Ministry of Agriculture and EEC statistics
(a) Including intra EEC trade
(b) Farm sales in per cent of domestic market utilization
(c) Usable production in per cent of total domestic utilization
(d) 1969-70 had exceptionally high imports. In 1968-69 or 70-71, the degree of self sufficiency was above 96
(e) INRA estimate
The deficit in durum wheat is important in percentage but small in total volume. France could produce more durum. In fact production has greatly increased in the past ten years. But it is wiser to import it from North Africa. The wine balance shows a deficit in quantities but the global trade in alcoholic beverages is strongly positive. One can wonder whether the deficit in fats and oils (and oil cake) is normal. It seems that tropical countries have a certain advantage for those commodities. Research efforts are however intensified to reduce the imports of proteins used in feed manufacture.

The pork deficit is difficult to explain and seems unjustified. It does not seem that it can last very long. The mutton deficit is small in absolute terms. For beef there is a deficit in value even if the trade is quantitatively positive.

2. The Outlook for Inputs

2.1 Labour

There are two series of statistical data concerning the active farm population: the population censuses and the agricultural censuses and surveys. The latter use a broader definition; the former are more widely used and will be employed here.

The main figures (table 2) show that the decline in active farm population which was at a rate of 3.5% per year for the 1954–62 period reached 3.8% per year during 1962–68. This rate should be maintained for a few more years but will slow down around 1975 as the number of old farmers reaching the age of retirement falls.

Table 2: THE DECLINE IN ACTIVE FARM POPULATION 1962–1970

<table>
<thead>
<tr>
<th>Year</th>
<th>Numbers in thousands</th>
<th>Salaried</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>3 822</td>
<td>771</td>
</tr>
<tr>
<td>1963</td>
<td>3 681</td>
<td>731</td>
</tr>
<tr>
<td>1964</td>
<td>3 542</td>
<td>693</td>
</tr>
<tr>
<td>1965</td>
<td>3 407</td>
<td>657</td>
</tr>
<tr>
<td>1966</td>
<td>3 276</td>
<td>622</td>
</tr>
<tr>
<td>1967</td>
<td>3 151</td>
<td>590</td>
</tr>
<tr>
<td>1968</td>
<td>3 031</td>
<td>560</td>
</tr>
<tr>
<td>1969</td>
<td>2 916</td>
<td>526</td>
</tr>
<tr>
<td>1970</td>
<td>2 803</td>
<td>498</td>
</tr>
<tr>
<td>1971</td>
<td>2 688</td>
<td>471</td>
</tr>
</tbody>
</table>

Source: INSEE (Official Statistics)

Average annual rate of decrease for the period:
- Total: 4 per cent
- Salaried: 6 per cent.

The 6th plan therefore forecasts 2.2 to 2.3 million active persons in agriculture in 1975 (against 3 million in 1968), roughly 10% of the total active population.
An other projection prepared by a private consulting firm (SEMA) for the E.E.C. 1) arrives at the figure of 2.6 million in 1976. Another consulting firm (SEDES) gives the following figures for males only 2).

<table>
<thead>
<tr>
<th>Year</th>
<th>Figures</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>1.76 million</td>
</tr>
<tr>
<td>1976</td>
<td>1.43 -</td>
</tr>
<tr>
<td>1981</td>
<td>1.16 -</td>
</tr>
</tbody>
</table>

It is not certain that those projections take into account all four components of the changes in the active farm population:

(a) entry (or non entry) of farmers' children leaving school;
(b) exit of young farmers and farm workers leaving agriculture for other jobs;
(c) entry of non agricultural job holders (or, seldom, students);
(d) exit of old farmers by retirement or death.

Item (d) is relatively easy to forecast. Some policy measures may accelerate slightly the retirement process but over a fairly long period their effect is limited.

Item (c) is usually omitted in forecasts. Agricultural jobs are considered to be the monopoly of farmers' children. This does not seem to be a realistic hypothesis — at least for salaried workers. It seems that, in the future, agriculture can easily attract any labour it may need through wage increases. This means that frequently made comments about the fact that too few farmers' children enter the farming profession are hardly justified.

Items (a) and (b), often handled together, are the most decisive in any serious projection. It seems that more studies of the way in which farmers' children decide to enter durably, or to enter for a short time, or not to enter at all the farming profession would be needed. The influence of the school system on those decisions is most important 3).

From a purely agricultural point of view, the active farm population can fall to levels noticeably below the current ones without any fall in output. In other words, productivity reserves are still important — provided of course capital is available and structural change is encouraged 4). The problem lies rather in the non agricultural sectors of the economy. Will they be able to absorb the people leaving agriculture? Will these people have the right training and proper guidance and housing in addition to jobs? It thus appears that some of the most important elements needed for a valid forecast of the active farm population are determined by non agricultural variables.

From a policy point of view, too much seems to be done for old farmers and not enough for the proper training and guidance of young people.

3) See the research by G. Jégouzo and co-workers in Rennes, for instance P. Daucé, G. Jégouzo, Y. Lambert. La formation des enfants d'agriculteurs et leur orientation hors de l'agriculture. Résultats d'une enquête exploratoire en Ille-et-Vilaine. INRA-Economie, Rennes, janv. 1971 (trav. de Rech. 9).
4) This is an important difference with the situation in the US where, in recent years and in contrast to the earlier situation total inputs have increased roughly at the same rate as output. This fact was drawn to our attention by W.W. Cochrane American Farm Policy in a tumultuous world. - Amer. J. Agr. Econ., 52-5 Déc. 1970, p. 646.
2.2 Land

A recent study shows that, for the 1963-67 period, the decrease in agricultural land area has been small: about 140,000 ha per year but only 50,000 ha of productive land (or 0.15 per cent of the total productively used area which is about 33 million ha).

This rate might accelerate slightly in coming years and one forecast predicts a loss of 60,000 ha per year (including 50,000 good hectares) for "urban" purposes and 120,000 ha per year (including 20,000 ha of good land) for afforestation. In all, agriculture would lose 180,000 ha per year but only 70,000 of really productive land 1).

Even if the objective is production and full use of the ability of the country to provide food, this small annual loss in land area is not significant. The rate of increase in yields is often five to fifteen times greater than the rate of decrease in the land area.

From a global point of view, therefore, land is not a problem. It is one, and very worrying, from the point of view of the individual farmer, for the landowners, for their mutual relations. The problem of financing of the agricultural land capital is also of major importance. However, all those questions have no direct bearing on the land input.

2.3 Current inputs

Inputs purchased from the other sectors of the economy are of course an essential element in the increase of agricultural production. The 6th Plan (1970-75) forecasts that they will continue to rise in volume at a rate close to 6 per cent per year. From 1952-56 to 1970-71 the annual rate of growth of fertiliser consumption in France was 8 per cent per year, about double that in the rest of North-west Europe 2).

One might wonder whether this type of trend will and can continue for long. Growing concern about the environment and pollution as well in progress in biological pest control methods may in some countries cause some slowing down in the use of chemicals in agriculture. In most French areas the problem is not yet of major importance and we believe that, for several years to come, concern about the environment will not be really serious in France and will remain verbal.

2.4 Knowhow

Under this heading, we want to examine the question of the knowledge of the farmers, their ability to adopt innovations at a rapid rate, their managerial skills. Part of the improvement in global factor productivity is obviously linked to this element. In this respect, the situation in France, though improving, is far from satisfactory. One indication of this can be found in the great variability in yields and financial results which can be observed within groups of farms in similar locations and of similar size and even types of farming. This appears visually when one travels through the country. We do not have statistical measures proving that the situation is worse in France than say, in the Netherlands; we however strongly believe that such is the case.

The explanation of this situation lies in part in the levels of education of farm operators, which is still very low, and in the weaknesses of the extension system. The number of

extension workers per 1000 farms is only about 2.5 and their quality is often low. We know however that even in countries with a much better ratio the situation is not perfect... 1).

2.5 Synthesis - the rise in yields

The indifferent level of husbandry found on the majority of French farms in most areas gives an indication of the potential for progress which exists in the country and which is quite obvious when one travels. However larger and larger parts of the land are well farmed and the proportion of competent farmers is rising. Above all, the majority of the farms, though far from well managed, tend to improve over time. All these elements combine to explain the continuous tendencies for average yields to increase. This is finally the most important element in any prediction of production over the next ten years.

Most of these improvements in yields will take place even if the terms of trade (price ratios of inputs to outputs) are unfavourable to agriculture, if the extension efforts remain weak, if structural change keeps a slow pace. They appear to be of an almost inevitable nature (which does not mean that prices are without importance). Only rigid production quotas could really stop the expansion in production.

Table 3 gives some figures on the annual rise in average yields in past years for a few important productions. From those figures it appears that the yields forecasted by the Plan for 1975 are conservative. (Wheat, 42 q/ha, maize, 60 q/ha, sugar beets, 48 t/ha, milk, 3800 kg/specialised milk cow).

Table 3: THE RISE IN YIELDS FOR THE MAIN CROPS FRANCE 1959 - 61 to 1969 - 71

<table>
<thead>
<tr>
<th>Crop</th>
<th>Average yield in tons per hectare</th>
<th>Average annual rate of increase in yields between the two periods %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Average 1959-60-61</td>
<td>Average 1969-70-71</td>
</tr>
<tr>
<td>Wheat (soft)</td>
<td>2.49</td>
<td>3.66</td>
</tr>
<tr>
<td>Barley</td>
<td>2.53</td>
<td>3.1</td>
</tr>
<tr>
<td>Maize</td>
<td>2.84</td>
<td>5.1</td>
</tr>
<tr>
<td>Main crop potatoes</td>
<td>15.7</td>
<td>23.0</td>
</tr>
<tr>
<td>Sugar beets</td>
<td>33.8</td>
<td>45.0</td>
</tr>
</tbody>
</table>

Source: Agricultural Statistics

For grains, it seems probable that the biological yields ceilings of 6 to 7 tons per hectare for wheat and 10 tons for maize will, within ten years, be pushed forwards 15 to 20 per cent. So the trend in yields should not only continue to rise as better farming practices spread over larger areas, it will also rise because top farms will continue to improve.

These remarks do not however provide us with a production forecast. In fact one can have doubts about the validity of crude projections by extrapolation of past tendencies (adjustment of simple trend function either linear or exponential to past series) which have been practiced recently in France. These methods might be acceptable for the short run but fail...
to take into account structural change, the growing sensitiveness of farming systems to price impulses, the pressures of marketing and processing firms, the effects of government interventions. They assume fixed price ratios which does not seem realistic. More elaborate models will have to be built if one wants better forecasts.

3 Changes in Size and Structure of Farms

In this chapter, we review present knowledge with regard to number and size of farms, certain rather new forms of farm organisation, the environment of the farms, the role of marketing and processing firms. Finally, we will examine the effect of government intervention which are of increasing importance as structural policies become fashionable.

3.1 Number and size of farms

In recent years (1967-70) the numbers of farms decreased at a rate close to 3 per cent per year. This rate (or even slightly higher) will probably continue at least until about 1975 because there is still an abnormally high proportion of old farmers who will soon retire.

Using data collected in 1963 on a one in ten sample survey A. Brun (with C. Laurent) developed estimates of the number of farms which would probably disappear between 1963 and 1978 because the farm operator was more than 50 years old and had no probable "successor" 1). This concept is not strictly and objectively definable but gave fairly good results for the past years. The same method has been applied to the data of the 1967 survey. For 1982, there should be around one million farms left 2).

Various attempts have been made to forecast the size distribution of farms and not only their numbers (and thus their average size). A Markov chain analysis indicates that, between 1967 and 1975, farms below 35 ha will decrease in numbers while those above that size will increase.

The general picture is thus one of slow change - even though the situation remains better in France than in the other continental countries of Western Europe.

3.2 Types of farms

There has been considerable discussion of at least three problems:
"capitalist" versus "peasant" farms;
group farming;
part-time farming.

We will first examine the two last ones which are relatively simple.

Group farming under the legislation concerning the Groupements Agricoles d'Exploitation en Commun (GAEC) is of limited statistical importance. In 1969 there were 1500 groups covering about 135 000 ha 3). More than 80 per cent of those groups consisted of members who all belonged to one family (brothers, father, sons ...). In accordance with the spirit of

2) Statistique agricole 1970.
the law of 1962 concerning GAEC, they remained small: two or three members for more than 80 per cent of the groups registered as of January list, 1969.

Part time farming is of considerable and in some aspects rising importance. It takes many forms and, in certain of these forms blends into subsistence and more generally poor farming. In 1963, 550 000 or 30 per cent of the farms produced final commodities valued at less than 10 000 francs, including family consumption. On another basis, and for the same year, 324 000 farmers - two-thirds of which were more than 60 years old - did not work full time on their farm and had no outside job. Their farms were thus often subsistence or partial retirement units. In addition, 340 000 farms were part-time units where the farmer had to obtain outside employment. Those two groups farmed 22 per cent of the land in farms. They have, on account of the ages of the farmers involved, decreased rapidly in recent years. Lastly, there is an element of part-time farming on 248 000 farms where one of the members of the farmers family living on the farm had outside employment. This last group may very well be the sign that transportation to work is easy rather than an indication of low farm income.

On the whole, part-time farming can be interpreted as a method by which farmers adapt to the inadequate income producing potential of their -too rigid-farms. Since they cannot manage to ensure the growth of their farm to an adequate economic size, they have to adjust the use of their own time to the existing size 1).

If roads and rural schools are good, if housing is scarce in towns, if industrial and other jobs are dispersed into a large number of scattered small towns instead of concentrated ... there is no reason why part-time farming should not expand or at least prove quite adaptable.

The possibilities of expansion of a capitalist type of agriculture have been discussed at length - which probably shows that the issue is complex. A large scale component has existed for many years in French agriculture - particularly in the Paris Basin and the vineyards of Languedoc. During the past twenty years a number of large scale orchards have been created and there has been an expansion of fairly large grain growing farms in central France and Champagne. However, those farms seldom have more than two or three permanent salaried workers. So even if there is some "exploitation" of labour it is on a small scale.

The prospect that outside capital will be attracted into agriculture thus creating a really capitalist sector is slim. The rates of return are too low and there are large numbers of farmers willing to produce whatever the capitalist might need for low returns (and ready to assume a great share of the risks).

We do not therefore visualize in the near future a rise of really capitalist farm units but rather a continuing enlargement of the larger family units where the managerial function will become more time consuming and more of the physical work will be done by salaried workers. It may well be that angry poor small farmers - of which there will be plenty left - will call those farmers "capitalists". That designation does not appear entirely valid to us. One must note also that the "capitalistic" or at least large scale farms of the Paris Basin are becoming rather less capitalist. They had 10 to 20 salaried workers before the last war. They were down to 3 to 5 workers in the sixties. Many now have one third or one half of the manual work done by the farmer himself.

3.3 The environment of the farms and supply of services

Much of the evolution in the structure of farms will depend on whether some services will be supplied to the medium farmers under efficient conditions and at reasonable prices.

Quite a lot exists in that field: service cooperatives (like artificial insemination), machinery cooperatives (the agricultural statistics say there are more than 9000 of those — but most are very small ...), mutual help of all kinds, private firms... It would be necessary to undertake more research on those firms and institutions, their efficiency, the pricing of their services, their reliability.

3.4 The role of marketing and processing firms

This question has been the subject of extensive and sometimes heated discussion in the past ten years. Factual data on the extent of vertical integration are rather scarce, however, in part because there are many subtle forms of pressures by firms buying from farmers which need not engage in formal contractual agreements.

Fairly strict pressures and often written contracts are now the rule for 70 to 80 per cent of poultry meat production and for about 50 per cent of egg production. This is well known. There has been an important shift in the nature of the integrators who used to be feed manufacturers and are now mostly slaughterhouses and packing stations more or less linked with large commercial and industrial groups or large scale diversified cooperatives.

For pig production, the extent of formal integration is quite small (though growing): about ten per cent. More or less strictly organized producer groups which handle all the pigs produced by their numbers and do some planning and bargaining handle an other 15 per cent. Feed companies may account for an additional eight per cent. The fact that pork processing industries are still very small explains the rather slow development of integration but this may change rapidly.

A large amount of calf feeding under contract is practiced, particularly in South-West France.

Lastly the fruit and vegetable canning industry makes extensive use of contracts.

It is important to note, however, that for the main products of French agriculture; grain, wine, fresh fruits and vegetables, beef and milk there is no formal integration. The experience of producer groups (groupelements de producteurs) for orderly marketing of fruits, vegetables and meat animals is not convincing. Their effects are usually small and their costs (particularly to the taxpayer) rather high.

However, there is a tendency for some firms, private or cooperative, to enter into kinds of preferential agreements with some of their suppliers, to promote their growth, help finance their equipment, train and inform the farmers thus selected. Some sorts of special links are therefore created between the farmer and the processor. This is visible with the provision of milk cooling and storage tanks in Western France (and may be rather contrary to some of the cooperative principles ...).

Summing up, it appears that even though the external appearance of most farms is undergoing only slow changes, some less visible forces are in fact forcing them to undergo extensive transformations. The size of farms increases only slowly. Though they are more capital intensive, labour is still a major factor of production and it is provided by farmers themselves with only a few salaried workers. These have sociological relationships with their employers which have little in common with those affecting industrial workers. Specialisation is increasing, but meat and milk with some grain are still the essential commodities on most farms. Direct capitalist penetration in agricultural production is very limited.
On the other hand, it is obvious that financial pressures and risks are an increasingly important factor in decision making. Farmers look for more stability in their receipts and therefore are willing to accept not only information and advice but various sorts or pressures and even orders from outside firms (they also ask for government enforced price stability but that is an other matter). The old myth of the (fairly) small farmer still is rather realistic. The myth of the independent farmer is not or, at least, his degree of freedom is more and more limited by the numerous economic forces affecting him.

It seems fairly obvious that we are in a world dominated by industrial capitalism. This does not mean that everything is directed by a big fat man smoking his cigar! The attitude of the leading decision centers of this world with regard to agriculture may well be one of neglect as long as farmers deliver the food (if possible at low cost) and buy large amounts of chemicals and equipment. At least for the medium term future, direct entry of those large scale capitalist firms in agriculture proper does not seem interesting for them.

Will the impact of government change this picture?

3.5 The effects of agricultural policy

A full study of this problem would greatly exceed the limits of this paper and we will therefore only present a few brief remarks.

With regard to population, the net long term effect of the costly programs for early retirement of old farmers is limited. With time they would have died or retired anyway.

Action to help young farmers and farmer’s children find good jobs outside agriculture offers great scope but at present is of limited importance in France. The numbers of training grants given to young farmers each year is only about one tenth of the number of retirement grants given.

Land policy measures are numerous. The most important one for structural change concerns the Sociétés d’Aménagement Foncier et d’Etablissement Rural (SAFER), created in 1960.

Those agencies always operate on limited quantities of land since they only can buy land put up for sale by its owner and have no right of expropriation. They often have a right of preemption but it is limited and excludes transactions between members of a family or linked with inheritance.

The direct structure-improving actions of those agencies are thus moderate. They have often acted to enable small increases in the area of medium-sized units which, in a totally liberal climate with no intervention, might have been absorbed by larger units. In other words, it may be that concentration of farms would have been faster without those agencies which maintained some medium-sized farms afloat.

Farm credit could be an essential tool in the acceleration of structural change. Its main visible effect is often increased land prices.

The important point, with regard to credit policy, is the need to prevent the tendency of farmers to overinvest and to combat the frequently encountered forms of ill-conceived sprinkling of credit to an excessive number of too small farms. (On the other hand, one must place the farms which seem able to develop in conditions favoring investments. This means stabilizing their incomes and preventing excessive self rationing in borrowing).

The French programme of subsidies for modernization of buildings used for cattle, which was in force during the sixties, is a good instance of this sprinkling. At the start it was planned that those subsidies should be reserved for farms having 20 to 25 cows. It appeared however that only 55,000 farms in France had more than 20 cows. So, little by little, a series of administrative
decisions brought the elegibility threshold down to 10 cows and 10 young cattle. This is a good illustration of the conflict between technocrats seeking efficiency and politicians presenting the social point of view and wishing to please as large a number of people as possible.

It seems that the only reasonably valid solution in that case is the establishment of complete long term development plans conceived so as to ensure the viability and growth of the farm. The only farms receiving subsidies and loans would be those setting up those plans. This method has been devised in England in the fifties. It is included in certain new proposals of the EEC derived from the Mansholt Plan under the name of "farm development plans".

The general idea is that help for modernization should be reserved for full time farms, managed by a competent farmer, keeping accounts and, above all, setting up a development plan showing that, within six years, precisely with the help of the requested loan, it will be able to provide those who work on it with an annual yearly income comparable with that of non agricultural workers.

Finally, there have been some measures concerning the size and type of farms but, in France, at least they are very ineffective. Legislation preventing mergers of farms (passed in 1958 and 1962) has had very little effect - less than peasant demonstrations against concentration. The creation of "industrial" livestock enterprises was prohibited (it is not any more). But the net effect was that they were developed in other countries which did not have restrictions of that kind!

There are plenty of official statements in favour of the small family farm and against "capitalist" agriculture. But in fact the weakness of agricultural taxation and the high prices for grain and sugar beets enable large mechanised farms to obtain high profits which give them the means to expand rapidly by absorbing small and medium farms (or, less visibly, by having one farmer owning and managing several farm units).

If one really wanted to prevent capitalist agriculture one would have to put a ceiling on the amount of price support payments a given farm could get and to develop strict progressive taxation.

Finally, it does not seem that, in its present state, structural policy is a really significant factor in the acceleration of the strong "natural" forces of structural transformation which have been at work for the past decades. Rather, it seems that the structural forces and policies outside agriculture (general economic growth, employment, regional policies, housing, town planning, education ...) are often more important than the structural policies influencing the internal agricultural variables - which does not mean that one should ignore and neglect those internal policies.

4 Conclusion

In the first part of this short paper, we have concluded that increases in production would inevitably take place in the coming years (in the absence of rigid production quotas). This will not, of course, be totally independent of the price levels and price policies but our belief is that even with lower prices production increases would continue. With more efficient extension efforts and accelerated structural change, the increases in production could easily become greater - and this would have positive effects on most farm incomes.

The population decrease and the influx of capital through various financing institutions are the most important factors in the rate of structural change. The analysis of the second part of this paper leads to less definite conclusions than the part concerning production. On the whole and looking at the structure of farms from a rather statistical point of view it appears that change has been rather slow and has no reason to become very rapid.
The limited absorption capacity of the other sectors prevents an acceleration of the rate of decrease in active population.

The influx of capital into agriculture for an acceleration of modernisation and structural change is also subject to fairly strict limits. The demands of other sectors are such that agriculture cannot hope to get much capital from outside.

The possibilities of a development of a really capitalist segment in the agricultural sector are limited by rigidities in the land market and, still more, by the fact that the foreseeable rates of profit are not tempting.

Thence one can forecast that, in ten or fifteen years, French farms, though fewer in numbers and thence bigger, will not look very different from what they are now from the point of view of a rather narrow statistical analysis. However, underneath the appearances, more significant real changes are constantly occurring and must constantly be observed and explained by the economic and sociological analysts.

Farmers are more economic conscious. They are responsible for highly complex and vulnerable enterprises. The risks involved oblige them to become more concerned with management and use more sophisticated management methods. This change of outlook increases the rift between farmers who become able to live with this complex capitalistic society of ours and those who feel that they cannot do it and become bitter and sometimes even destructive. This and several other factors lead us to believe that farmers organisation will become more divided and that political struggle between farmers will become more acute. Social scientists studying agriculture will have therefore to become more concerned with political science aspects of their work.

For the more docile segments of the agricultural sector, though forms will, in our opinion, not be legally taken over by capitalistic firms in the form of limited liability companies, the pressures exerted on them by outside firms will be increased. Farmers will more and more be told what to do and how to do it - and one will manage to convince them that it is in their own interest to follow those indications. The increased use of outside service firms will also reduce the independance of the farmer.

Several other types of farms will, however, compete with this "docile" segment: those who can be more independant because they have developed a special market for unconventional products; those producing for markets sheltered by government regulation and marketing boards; those with outside employment; non conformists who do not want to accept the prevailing "system"... Competition between them has no reason to be mild.

Lastly, this competition within types of farms will take place within a dwindling sector. The traditional farm production sub-sector of the economy is faced with a rather continuous process of erosion which in fact decreases its importance within the larger food-agriculture agro-industrial sector (often called agri-business). More and more farm activities are transfered to input industries or to output industries or to service firms. More and more foods (and of course textiles) are produced by non agricultural processes.

This means a decrease in the importance and the influence of the farmers as food producers. Their importance as the major users of land - this highly scarce and precious resource - remains great. We thus have an example of the way in which the emphasis on the many components of the farm problem constantly changes over time. Remaining aware of those changes is for all of us a fascinating intellectual challenge.